

A9
28. (Amended One Time) The speech recognition server of claim 25, wherein the interrupt indicator is provided by locally recognizing, at the subscriber unit, at least one predetermined utterance in the voice communication.

REMARKS

A Final Office Action was mailed July 30, 2001 (Paper No. 7) on the above captioned application. The Applicant respectfully traverses and requests reconsideration.

Claims 1-29 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Ellis in view of Houser. The Examiner has noted, and the applicant agrees, that Ellis fails to teach "detecting the presence of an indicator during speech that activates the speech recognition processing." To overcome this deficiency, Houser is cited as teaching "a detector for detecting a predetermined utterance during speech that activates the speech recognition function" It is thereafter argued that "[i]t would have been obvious to one of ordinary skill in the art to modify the subscriber unit of Ellis to add a detector to activate the speech recognition as taught by Houser in order to allow the speech recognition function to be disabled until needed, thereby eliminating unnecessary processing." In short, the Examiner argues that it would have been obvious to put speech recognition functionality into the subscriber unit if Ellis in order to know when to activate speech recognition functionality in the infrastructure in order to eliminate unnecessary processing.

The Applicant respectfully disagrees with the Examiner's line of reasoning to combine Ellis and Houser. Ellis clearly advocates eliminating speech recognition processing at the subscriber unit and instead teaches that it would be desirable to create distributed speech

recognition processing. Indeed, Ellis recognizes that “full-function speech recognition [is] in a cost class of its own . . . beyond the capacity of any handheld device.” (Ellis, paragraph 3) For this very reason, Ellis proposes to “move the speech recognition front-end (i.e., the computationally simple feature extraction module) . . . to the handset” and thereafter “pass [speech] feature codes . . . back to powerful, multi-user recognition servers.” (Ellis, paragraph 6) Thus, to assert that it would have been obvious to incorporate speech recognition into the subscriber unit of Ellis ignores the very goal of Ellis—to avoid speech recognition processing in the subscriber unit. Stated another way, given Ellis’ desire to avoid speech recognition processing in the subscriber unit, a person having ordinary skill the art would not have found it obvious to incorporate speech recognition functionality (be it that taught by Houser or any other reference) into the subscriber unit of Ellis.

The Applicant further notes that Ellis appears to have been cognizant of the same difficulties presented by wireless communication systems (Ellis, paragraph 5: “network channel limitations”) as was the Applicant (instant application, page 2, lines 17-20: “fluctuating nature of wireless communication channels”). Despite common recognition of this problem, it is not until the instant application that one encounters any suggestion for providing some functionality in the subscriber unit to “wake up” speech recognition services in a distributed speech recognition arrangement.

The Examiner has asserted that it is the *combination* of Ellis in view of Houser that teaches local detection of an interrupt indicator, i.e., incorporate the speech recognition of Houser into Ellis’ subscriber unit. Nevertheless, the Examiner has further noted that “detection at the local subscriber is clearly contemplated” by Houser; that “even if the detection logic were to be located elsewhere than the subscriber unit the actual interrupt, i.e., the predetermined

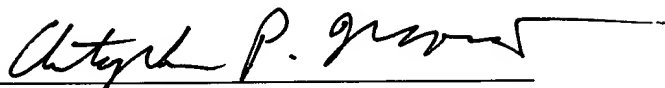
speech pattern would have to be detected at the subscriber”; and that “[e]ven if it were merely a microphone with no other logic circuitry, it would clearly meet the claim requirement of detecting the audio pattern.” In this manner, it appears that the Examiner is reading the word “detect” so broadly as to be equivalent to “receive”. Such a reading would appear to be counter to the commonly understood definition of “detect”, e.g., “to discover or notice the existence or presence of” (Random House Webster’s College Dictionary 1995). Nevertheless, in order to more clearly state that which the Applicant regards as his invention, independent claims 1, 9, 17, 20 and 25, as well as various dependent claims, have been amended above to recite the limitation of recognizing the presence of an interrupt indicator at the subscriber unit. These amendments do not add new matter to the claims. The Applicant respectfully submits that Ellis in view of Houser fails to teach recognition, at a subscriber unit, of the presence of an interrupt indicator.

For these reasons, the Applicant respectfully submits that claims 1, 9, 17, 20 and 25 are not obvious given Ellis in light of Houser and are therefore in condition for allowance. Furthermore, regarding claims 2-8, 10-16, 21-24 and 26-29, the applicant notes that these claims are dependent upon, and therefore incorporate the limitations of, claims 1, 9, 17, 20 and 25, respectively, and recite additional patentable subject matter. Because claims 1, 9, 17, 20 and 25 are not obvious given Ellis in view of Houser, the applicant respectfully submits that claims 2-8, 10-16, 21-24 and 26-29 are also allowable over the combination of Ellis in view of Houser to the extent that claims 2-8, 10-16, 21-24 and 26-29 are dependent upon, while further limiting to, claims 1, 9, 17, 20 and 25, respectively.

For at least the reasons described above, the applicant respectfully submits that the claims are in condition for allowance. The Examiner is invited to contact the below-listed attorney if

the Examiner believes that a telephone conference will advance the prosecution of this application.

Respectfully submitted,

By 

Christopher P. Moreno
Registration No 38,566

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VEDDER, PRICE, KAUFMAN & KAMMHOLZ
222 N. LaSalle Street
Chicago, IL 60601
(312) 609-7797
FAX: (312) 609-5005

VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the claims:

1. **(Amended One Time)** In a subscriber unit capable of wireless communication with an infrastructure thereby providing voice communications between a user of the subscriber unit and another person via the infrastructure, the infrastructure comprising a speech recognition server, a method comprising steps of:

engaging in a voice communication between the user of the subscriber unit and the other person via the infrastructure;

locally recognizing [detecting], during the voice conversation, presence of an interrupt indicator; and

activating, in response to the presence of the interrupt indicator, a portion of a speech recognition element to begin processing voice-based commands, wherein the speech recognition element is implemented at least in part within the infrastructure.

2. **(Amended One Time)** The method of claim 1, wherein the step of locally recognizing [detecting] further comprises a step of:

activating an input device forming a part of the subscriber unit to provide the interrupt indicator.

4. **(Amended One Time)** The method of claim 1, wherein the step of locally detecting further comprises steps of:

locally monitoring the voice communication, via a local speech recognizer implemented within the subscriber unit, for at least one predetermined utterance; and

providing the interrupt indicator upon recognizing [detecting] one of the at least one predetermined utterance.

9. **(Amended One Time)** A subscriber unit that wirelessly communicates with an infrastructure, the subscriber unit comprising:

a detector for locally recognizing [detecting] presence of an interrupt indicator during a voice communication between the subscriber unit and the infrastructure; and

a portion of a speech recognition element that takes as input the presence of the interrupt indicator and, being activated by the presence of the interrupt indicator, begins processing voice-based commands, wherein the speech recognition element is implemented at least in part within the infrastructure.

12. **(Amended One Time)** The subscriber unit of claim 9, wherein the detector comprises a local speech recognizer that monitors the voice communication for at least one predetermined utterance and that recognizes [detects the] presence of the interrupt indicator upon detecting one of the at least one predetermined utterance.

17. **(Amended One Time)** A wireless communication system comprising at least one subscriber unit in wireless communication with an infrastructure, the wireless communication system comprising:

within each of the at least one subscriber unit:

a detector for locally recognizing [detecting the] presence of an interrupt indicator during a voice communication between one of the at least one subscriber unit and the infrastructure;

a speech recognition client that takes as input the presence of the interrupt indicator and, being activated by the presence of the interrupt indicator, begins processing voice-based commands; and

a speech recognition server, within the infrastructure, that cooperates with the speech recognition client to provide a speech recognition element.

20. **(Amended One Time)** In a speech recognition server forming a part of an infrastructure and a part of a speech recognition element, the infrastructure in wireless communication with at least one subscriber unit, a method comprising steps of:

receiving, from a subscriber unit of the at least one subscriber unit, speech information provided in response to local recognition [detection], at the subscriber unit, of presence of an interrupt indicator during a voice communication; and

performing speech recognition processing based on the speech information.

23. **(Amended One Time)** The method of claim 20, wherein the interrupt indicator is recognized [provided] by locally monitoring, at the subscriber unit, the voice communication for at least one predetermined utterance.

25. **(Amended One Time)** A speech recognition server for use in an infrastructure that is in wireless communication with at least one subscriber unit, the speech recognition server comprising:

a receiver that takes as input speech information received from a subscriber unit of the at least one subscriber unit in response to local recognition [detection], at the subscriber unit, of presence of an interrupt indicator during a voice communication; and

a speech recognition analyzer that performs speech recognition processing based on the speech information.

28. **(Amended One Time)** The speech recognition server of claim 25, wherein the interrupt indicator is provided by locally recognizing [monitoring], at the subscriber unit, [the voice communication for] at least one predetermined utterance in the voice communication.